



**REPLACEMENT CLAIMS**

Following are "clean" rewritten claims in accordance with amendments made herein.

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1. A semiconductor switch comprising:

a first electrode, a second electrode, and a third electrode formed on a semiconductor substrate;

*A2*  
said first electrode and said second electrode connected with the earth and disposed in parallel to each other,

said third electrode formed between said first and said second electrode, said third electrode supplied with one of ground potential and a non-zero voltage potential so that said switch is rendered ON when said third electrode is supplied with said ground potential and said switch is rendered OFF when said third electrode is supplied with said non-zero voltage potential;

a first terminal coupled to one end of said third electrode; and

a second terminal coupled to the other end of said third electrode.

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*Am*

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5. A switching circuit comprising:

a coplanar transmission line having a signal line, conductors arranged such that said signal line is sandwiched between the conductors, said conductors applied to ground potential, said signal line supplied with one of ground potential and a non-zero voltage potential so that said switching circuit is rendered ON when said signal line is supplied with said ground potential and said switching circuit is rendered OFF when said signal line is supplied with said non-zero voltage potential;

an element having a first electrode coupled to said coplanar transmission line, a second electrode and a third electrode, said second and third electrodes applied to ground potential; and

a signal terminal coupled to said coplanar transmission line.

*Am*

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10. The switch as claimed in claim 1, further comprising:

a resistor having a first end connected to said third electrode and a second end supplied with said one of said ground potential and said non-zero voltage potential.

*A4 cont.*

11. A semiconductor switch comprising:

- an i-GaAs layer;
- a first n-AlGaAs layer formed on said i-GaAs layer;
- an i-InGaAs layer formed on said n-AlGaAs layer;
- a second n-AlGaAs layer formed on said i-InGaAs layer;
- a first n<sup>+</sup>GaAs layer formed on said second n-AlGaAs layer;
- a second n<sup>+</sup>GaAs layer apart from said first n<sup>+</sup>GaAs layer formed on said second n-AlGaAs layer;
- a source electrode of a transistor formed on said first n<sup>+</sup>GaAs layer and supplied with a ground potential;
- a drain electrode of a transistor formed on said second n<sup>+</sup>GaAs layer and supplied with said ground potential; and
- a gate electrode of a transistor formed between said source and drain electrodes on said second n-AlGaAs layer and having a first end coupled to a first terminal and a second end coupled to a second terminal.

12. The switch as claimed in claim 11, wherein said transistor being rendered in an OFF state when a ground potential is applied to said gate electrode thereby said switch being rendered in an ON state when said ground potential is applied to said gate electrode.

*AK*  
*cont.*

13. The switch as claimed in claim 12, further comprising:

a resistor having a first end connected to said gate electrode and a second end supplied with said ground potential.

14. A semiconductor switch comprising:

an i-GaAs layer;

a first i-AlGaAs layer formed on said first i-GaAs layer;

an i-InGaAs layer formed on said i-AlGaAs layer;

a n-AlGaAs layer formed on said i-InGaAs layer;

a first anode electrode of a diode formed on said n-AlGaAs layer and supplied with a ground potential;

a second anode electrode of a diode formed on said n-AlGaAs layer and supplied with said ground potential;

an  $n^+$ GaAs layer formed between said first and second anodes on said n-AlGaAs layer; and

a cathode electrode of a diode formed on said  $n^+$ GaAs layer and having a first end coupled to a first terminal and a second end coupled to a second terminal.

15. The switch as claimed in claim 14, wherein said diode acts as capacitance when said ground potential is applied to said cathode electrode thereby said switch being rendered in ON state.

16. The switch as claimed in claim 15, further comprising:

a resistor having a first end connected to said cathode electrode and a second end supplied with said ground potential.

17. (Amended) A semiconductor switch comprising:

an i-GaAs layer;

a first i-AlGaAs layer formed on said first i-GaAs layer;

an i-InGaAs layer formed on said i-AlGaAs layer;

a n-AlGaAs layer formed on said i-InGaAs layer;

a first n<sup>+</sup>GaAs layer formed on said n-AlGaAs layer;

a second n<sup>+</sup>GaAs layer apart from said first n<sup>+</sup>GaAs layer formed on said n-AlGaAs layer;

a first cathode electrode of a diode formed on said first n<sup>+</sup>GaAs layer and supplied with a ground potential;

a second cathode electrode of a diode formed on said second n<sup>+</sup>GaAs layer and supplied with said ground potential; and

an anode electrode of a diode formed between said first and second cathodes on said n-AlGaAs layer and having a first end coupled to a first terminal and a second end coupled to a second terminal.

18. The switch as claimed in claim 17, wherein said diode acts as capacitance when said ground potential is applied to said anode electrode thereby said switch being rendered in ON state.

- All  
amended*
19. The switch as claimed in claim 18, further comprising:  
a resistor having a first end connected to said anode electrode and a second end  
supplied with said ground potential.
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